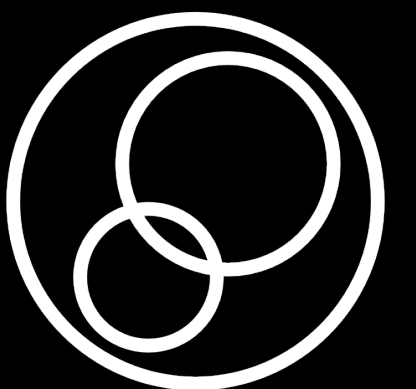




Lawrence Lee

WELCOME TO AI4MUC

Lance Cooley, **Tova Holmes**, Walter
Hopkins, Michael Kagan, Young-Kee
Kim, Matthias Liepe, Patrick
Meade, Chad Mitchell, Isobel Ojalvo



USMCC

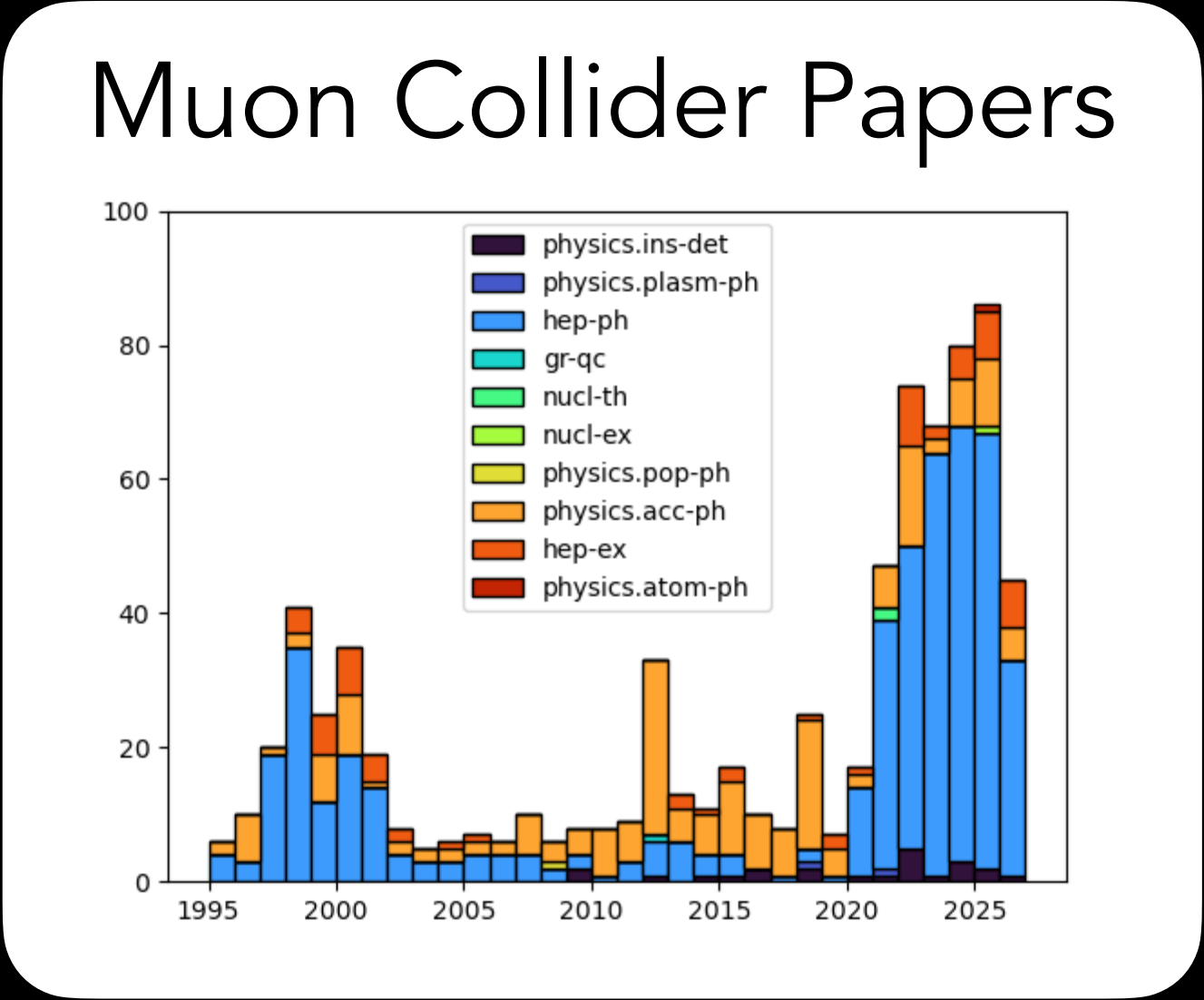
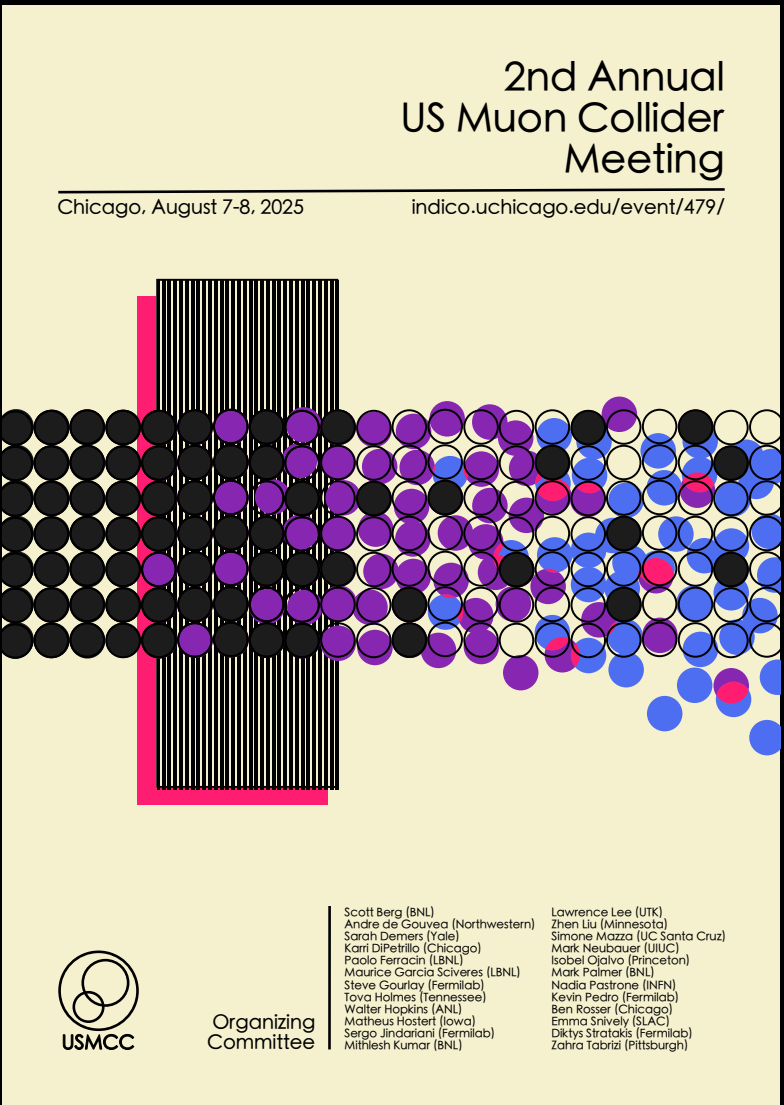
Artificial Intelligence for Muon Colliders
June 29-30, 2026

WHY ARE WE HERE?



growing and active **community** in the US —
but limited resources to
support R&D

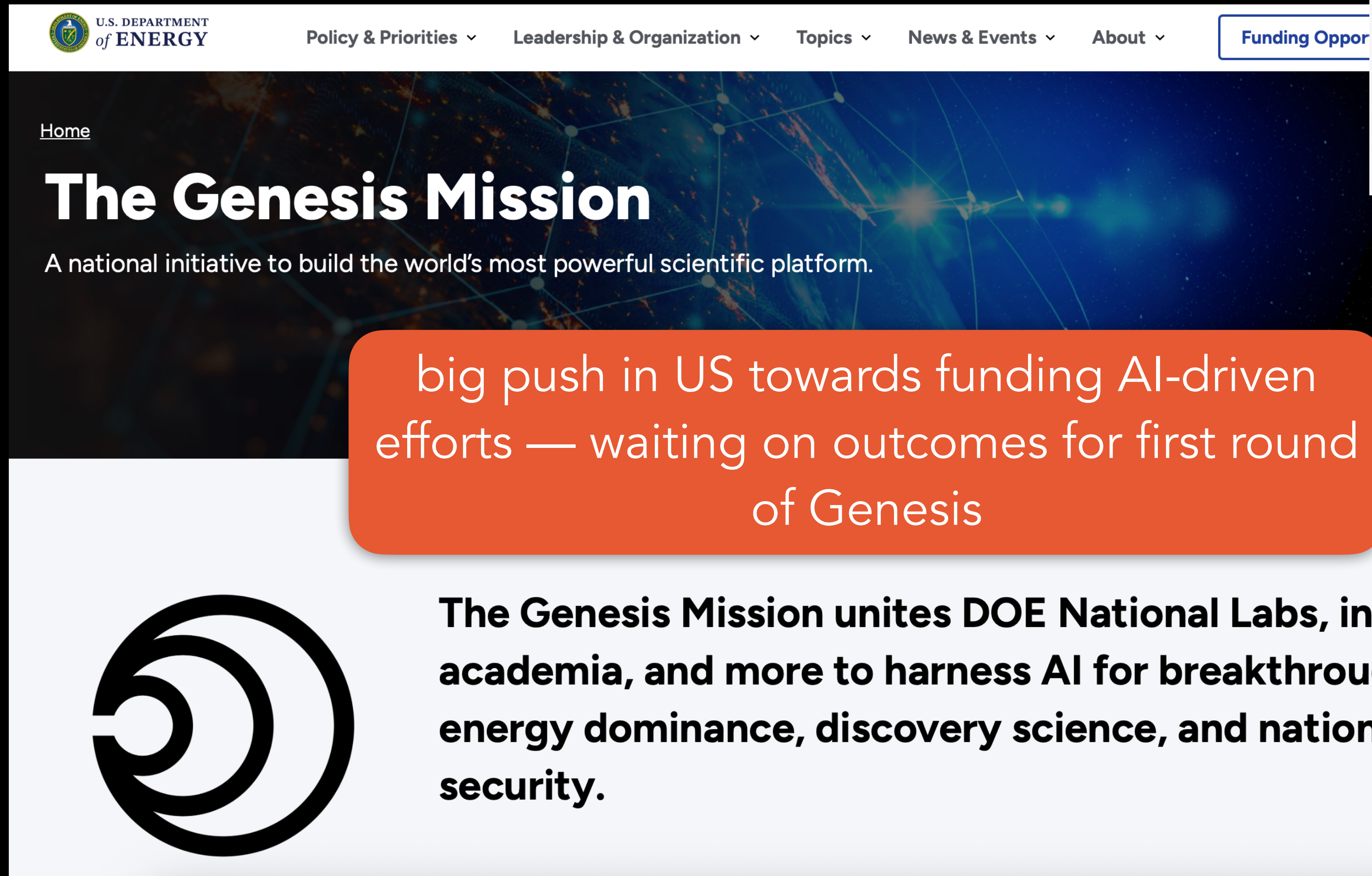
muon collider identified as a **vision** for
US's particle physics future



from arxiv

complex system with
many challenges — all
in early stages of being
understood

WHY ARE WE HERE?



The screenshot shows the U.S. Department of Energy website. The header includes the DOE logo and navigation links: Policy & Priorities, Leadership & Organization, Topics, News & Events, About, and a highlighted Funding Opportunities link. The main content area features a large image of a network structure with the heading 'The Genesis Mission' and the subtitle 'A national initiative to build the world's most powerful scientific platform.' Below this, there is a circular logo consisting of three concentric arcs. To the right of the logo, the text reads: 'The Genesis Mission unites DOE National Labs, industry, academia, and more to harness AI for breakthroughs in energy dominance, discovery science, and national security.'

Politics

Japan, U.S. form \$1 billion partnership on AI-driven projects

June 5 | 06:00 am JST | 2 Comments

big push in US towards funding AI-driven efforts — waiting on outcomes for first round of Genesis

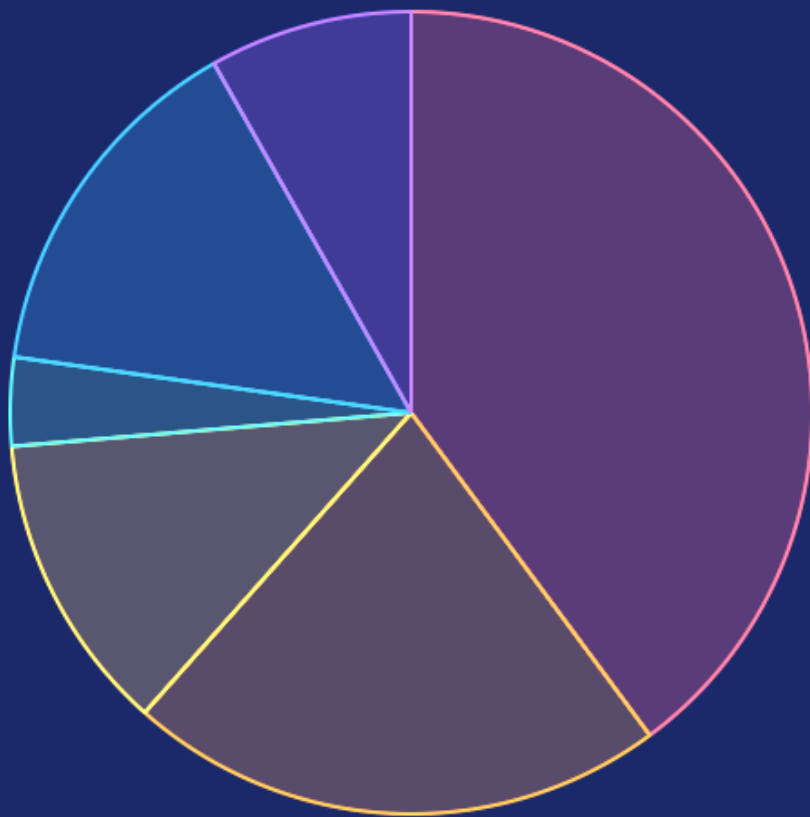
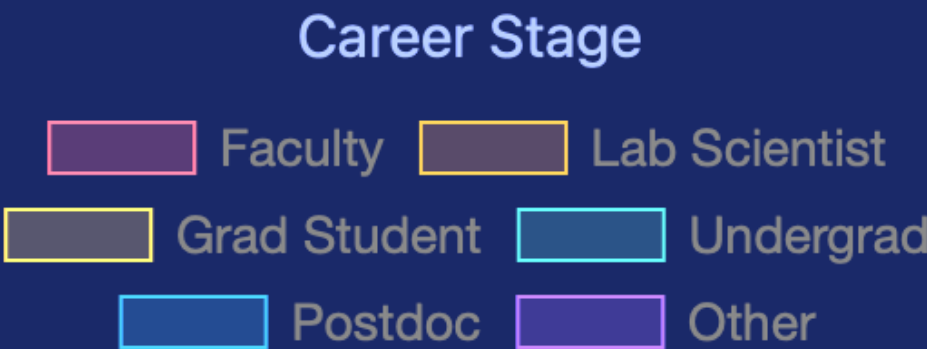
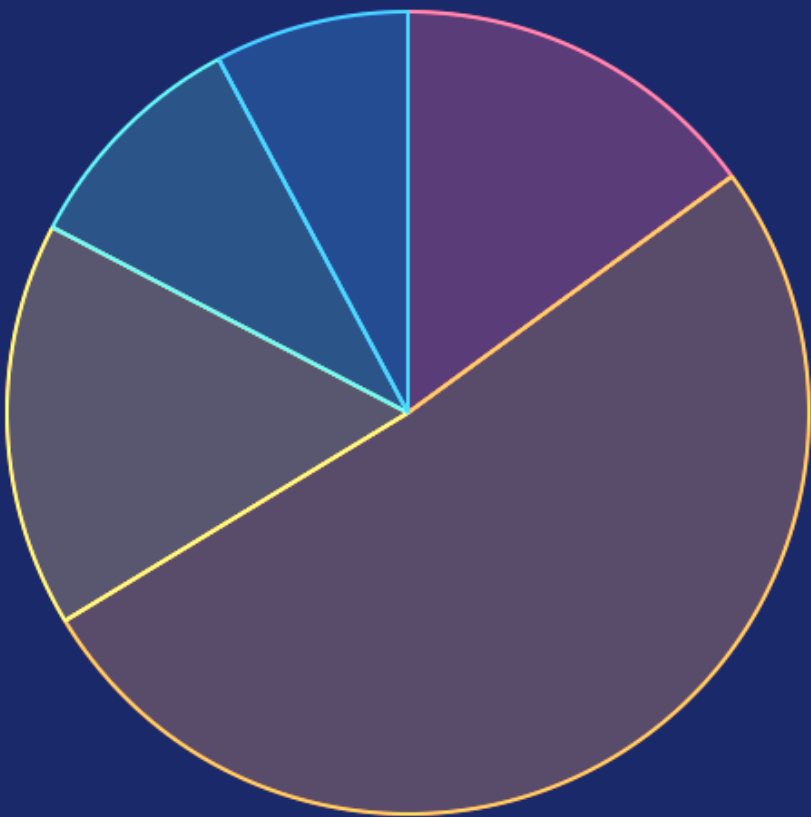
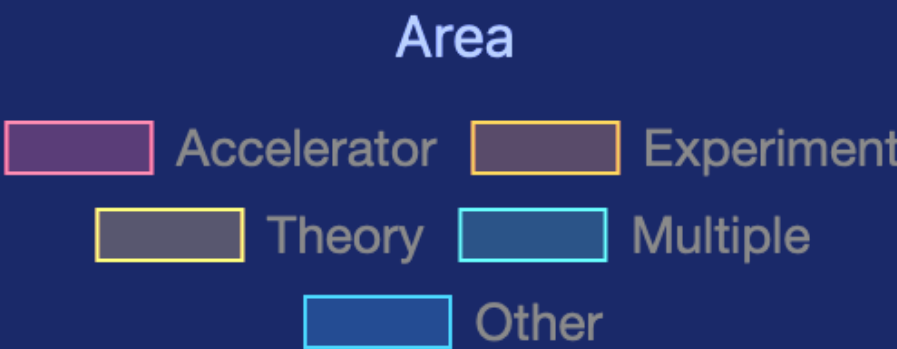
many μ C challenges hinge on limitations of simulation or pattern recognition

where can AI/ML be most useful, and what can we learn from existing efforts?

THE USMCC

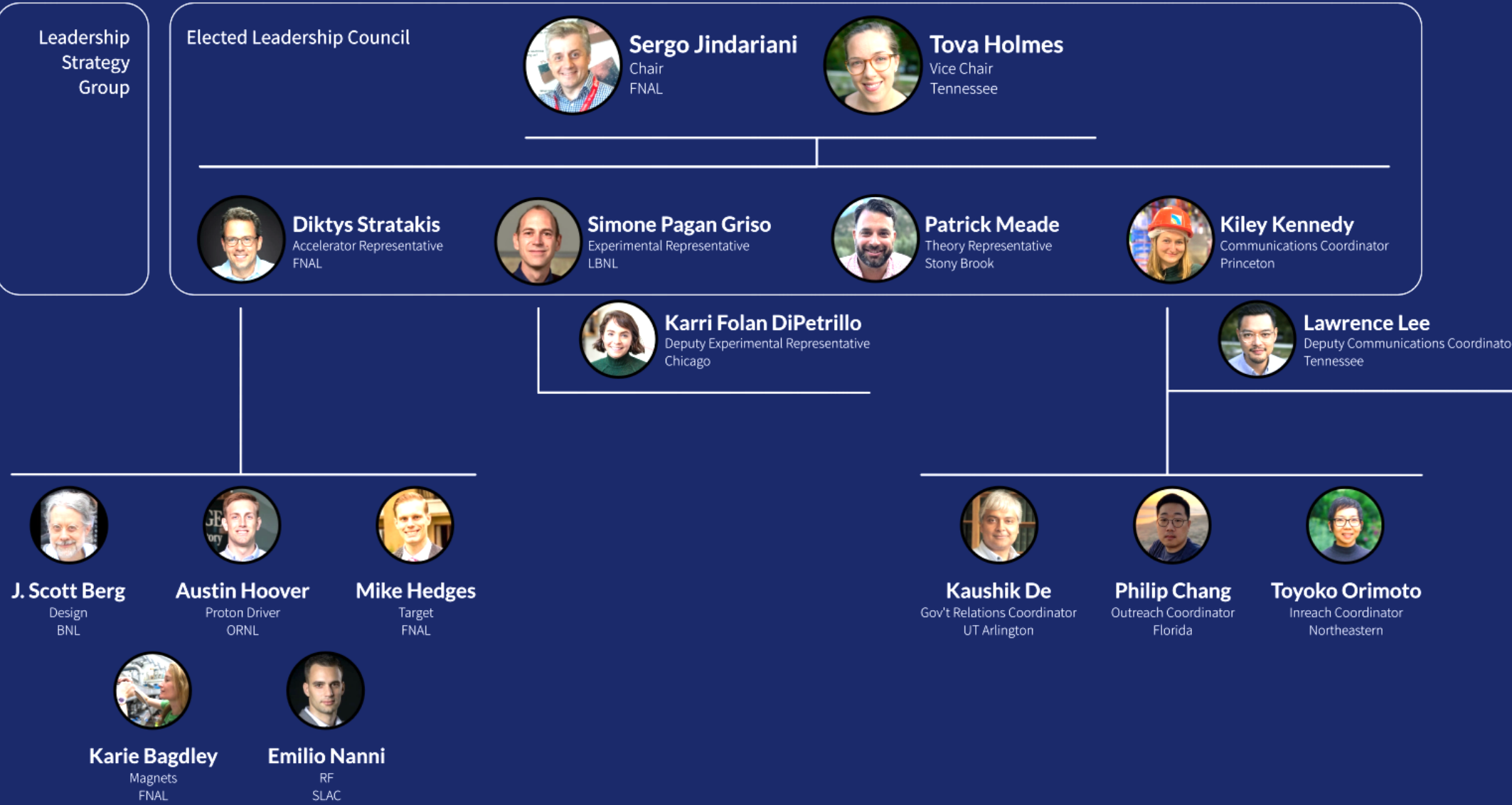
organizes the US effort
towards a muon collider

278 members



USMCC Leadership

Nov 2025



if you'd like to join
usmcc, email me —
tholmes@utk.edu

COMMUNICATION / DOCUMENTATION

- Join the [#ai4muc channel](#) on our USMCC slack [[invite link](#)]
- We'll be creating a live transcript which will be turned into a summary document of this workshop — speakers will edit and all will be invited to comment
- In addition, we'll take notes [here](#) (everyone is welcome to add)

DURING THE WORKSHOP

- Keep to time and avoid rabbit holes in discussion
- Avoid jargon when possible / speak to non-experts
- In discussion, focus on actionable questions
 - What are the bottlenecks?
 - What data/simulation exists?
 - What AI methods might plausibly help?
 - What is the next step?
 - Who's interested?



**THANK YOU
& WELCOME!**